

successful inoculation produces a lesion greatly resembling a gumma. When the system is under the influence of constitutional syphilis (especially in the first year of the disease) the skin is immune to fresh inoculations, unless the inoculated material is exceptionally rich in treponemata, in which event local superinfection can be produced. The three great remedial agents in the treatment of syphilis to-day are salvarsan, mercury and iodine, and although mercury was temporarily displaced, it is gradually returning to its former position.

In the first period of syphilis abortion of the disease seems to be possible; during the second period, a cure is less readily brought about, and in the tertiary period it is doubtful if a cure is ever accomplished, and the best that can be done here is to abolish the symptoms as they appear. Even at this day, when so many thousands have been treated by the new remedies and the treatment checked up by the Wassermann test, no one knows what the future will prove. Relapses are reported more frequently than before. Those cases that were given several large injections of salvarsan and also mercury, so far have shown the most favorable behavior.

H. E. ALDERSON.

#### THE COLLECTION BUREAU PLAN OF THE LOS ANGELES COUNTY MEDICAL ASSOCIATION.\*

By GEORGE H. KRESS, M. D., Los Angeles.

About three years ago, the writer of this article corresponded with the three or four county medical associations in the United States which were trying to maintain collection bureaus as part of their activities. This correspondence demonstrated that no matter how splendid a theoretical proposition a collection bureau adjunct of a county medical unit might be, that in practice it was one which could result in a serious financial deficit to a county medical association; as witness the experience of one or two societies that had tried to maintain such bureaus in eastern communities.

For it is to be remembered first, that honest attempts to courteously and yet firmly insist on the payment of overdue bills, especially of bills for professional services in small amounts, in widely scattered portions of the community are by no means carried out without the expenditure of thought, effort and money. And when to this is added the indifference of county society members to cooperate by sending in to such a bureau their good collectible accounts, plus a decided inclination to unload on the bureau a host of virtually outlawed accounts, it can be imagined how small a chance there is to conduct such a doctor's or medical society's collection bureau on a profitable basis.

Profiting, therefore, by the experience of other county societies, we early decided to obligate the Los Angeles County Society in no such manner, contenting ourselves with making a contract

with a private collection bureau, but sending to every member by mail a large envelope containing about one hundred follow-up letters and an especially printed booklet containing blanks on which to send names of delinquent clients to the collection bureau, and other memoranda concerning delinquent patients.

The Los Angeles Society Collection Bureau Outfit of 1911 consisted of such a report booklet and five envelopes each containing twenty slips, size, three by five inches. The wording of each of these slips will be found at the end of this article.

The Collection Bureau of 1912 contained the above, plus an envelope in which was enclosed twenty-five gummed slips, on each of which was printed in red ink, seven different "follow-up" notices, the different notices being torn off as needed, along perforated lines. The entire gummed slip measured eight by three inches and each of the seven notices thereon measured one by three inches. There were a total of about three hundred "follow-up slips" or notices in each outfit.

So much for the plan. The important question is as to how it actually worked out in Los Angeles.

That part of the plan which has to do with the collecting agency has not been successful, for the reasons already given as applying to Eastern societies and which two years' experience in Los Angeles has demonstrated, applies also to that city. Physicians there, as elsewhere, seem to prefer dealing with individual collecting agencies rather than with one common bureau; but the other part of the plan and especially the gummed "follow-up slips" to be attached to the bills of delinquents, have done very excellent service. It has been the complaint of the Collection Bureau Manager with whose company we have done business, that we have made every member of the Society his own collector, with these slips, so that only the accounts of the hardened delinquents, as a rule, reached his company.

Judging from the comments of Los Angeles County members it may be stated that our experience with this plan has been very favorable and we believe the State Medical Society would profit tremendously if an outfit of the gummed slips at least, were sent to every member of the State Society every year, say at the same time the State Register was distributed. The cost of printing these slips would be inconsequential and if desired, the Los Angeles County Society would gladly loan its electroplates for this purpose.

In order to bring this matter to the attention of the county medical societies in California, a complete Los Angeles County Society outfit will be sent to the secretary of every county unit, about the time this article is printed, with the request that the attention of the Society be called to these outfits and the plan explained.

The State Councilors will gladly send to all who so request, sets of the gummed slips. All such requests should be sent to the Secretary of

\* Written for the Journal of the Medical Society of the State of California at the request of the Board of Councilors of the State Society.

the State Medical Society, Dr. Philip M. Jones, Butler Building, San Francisco.

If sufficient interest is manifested in the plan, such a distribution of gummed slips will be made to all members of the State Society, each year and without cost to them, and it may be possible for the State Councilors to elaborate some other plans related to the above, if sufficient interest and co-operation is shown by the members at large.

Certainly if all the members of the State Medical Society, from one border of the state to the other, would begin to use a uniform system of "following up" delinquent clients, the influence on the community and on the profession could not be otherwise than good.

What is done, however, will depend largely on what the members show they want. If you want some of these slips, write to the State Secretary for them.

## SYMPOSIUM ON THE WASSERMANN REACTION AND SALVARSAN TREATMENT IN SYPHILIS.

### CONCERNING THE STANDARDIZATION OF REAGENTS FOR THE WASSERMANN TEST.\*

By WALTER V. BREM, M. D., Los Angeles.

The value of the Wassermann test is no longer a question open for discussion. Its great value in syphilitic infections as a diagnostic measure, as a guide in the treatment of the disease, and as the only criterion of cure, has been so abundantly proved by competent investigators that the presentation of further statistics regarding the percentages of positive and negative reactions in various clinical conditions and stages of the disease, is but to carry "coals to Newcastle." In other words, the test has already been so carefully scrutinized by able men in the light of clinical phenomena, that clinical reports at variance *with established values obtained by properly conducted tests* demand the exhaustion of at least two lines of investigation before the test itself can be attacked.

1. A critical analysis of the clinical phenomena reported.
2. An examination of the reagents used in the test.

For example, Newmark<sup>1</sup> has recently reported positive Wassermann tests from the serum and cerebrospinal fluid of two patients with tumors of the central nervous system. At autopsy on the body of one of these patients, a "gliosarcoma" of the brain and a carcinoma of the breast were found. At operation upon the other patient an intradural psammona was removed and the patient recovered. In neither instance was there any evidence of syphilis discovered other than the positive Wassermann tests. Waiving a discussion of the possibility of latent syphilis, to which Newmark amply calls attention, the second investigation leads to an examination of the reagents used.

Newmark dismisses this subject by saying that "the examinations of the blood-serum and cerebrospinal fluid were made by men whose experience with the method now extends to thousands of cases." It may be true that these men are experienced and careful and that their reagents were ideal. As a clinician not actively familiar with the intricacies of the test, Newmark was perhaps justified in not asking for and incorporating in his paper a detailed account of the technic used and of the titre of the reagents. But those of us who have suffered in the making of the reagents and in their accurate titration, must ask for something more than we were given before we can accept the results. In the light of data that I shall report below, one can see how necessary it is to have detailed information before accepting phenomena at variance with results obtained by able investigators whom we know and have learned to trust. The *Journal of the American Medical Association*, without a consideration of the reagents used in the tests above referred to, attempted in an editorial<sup>2</sup> to account for the non-specific complement-fixations in this and other Wassermann tests by advancing statements of three possibilities. The first possibility, while it must be admitted, seems almost too remote to be seriously considered, and it fails completely when Noguchi's acetone-insoluble fraction of the alcoholic extract of fresh beef-heart is used as an antigen. The second and third possibilities are inadequate as explanations if the tests were properly controlled and the reagents accurately standardized. This brings me to the theme of my paper.

It is my opinion that advance in the use of the Wassermann test is not to be made by further complications of statistics, but by the demand from the medical profession for carefully standardized reagents. It is with the hope of helping to stimulate this demand that I have chosen as my theme to-day, "The Need of Carefully Standardized Reagents in the Wassermann Test," and I may add, of a uniform method of making the test. At the present time there are almost as many so-called Wassermann tests as there are men making them, and as there are different sets of reagents used. It is obvious that this complicates results and brings upon the test undeserved criticism in sections where it is abused.

On one occasion, while my own reagents were being made, I obtained and attempted to use reagents issued from an advertising laboratory that not only offered to furnish reagents to the profession, but also to teach physicians how to do the Wassermann test. The reagents that I obtained were an alcoholic extract of syphilitic liver for antigen and human and sheep-rabbit immune sera for amboceptors. The antigen was so strongly hemolytic that it was useless, and the human-rabbit amboceptor was of such a low titre and poor quality that it also had to be discarded. I had an extremely unsatisfactory correspondence with this laboratory regarding its reagents, and was told that no matter if the antigen was hemolytic, it would work in the test; that patients' sera were

\* Read before the Forty-Second Annual Meeting of the State Society, Del Monte, April, 1912.